AMENDMENTS TO THE CLAIMS

Amend the claims as follows. This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims

1. (Currently amended) A method to operate a digital signal receiver, comprising:

detecting the occurrence of a symbol degrading event for a received signal, wherein the symbol degrading event occurs after transmission and before reception of the received signal;

inserting zero symbols into a received symbol stream to replace symbols degraded by the signal degrading event prior to de-interleaving the received signal; and

error correction decoding the received symbol stream having the inserted zero symbols.

2. (Original) A method as in claim 1, where error correction decoding comprises operating a Reed-Solomon decoder.

3. (Original) A method as in claim 1, where error correction decoding comprises operating a BCH decoder.

4.   (Original) A method as in claim 1, where error correction decoding comprises operating a Turbo decoder.

5.   (Original) A method as in claim 1, where inserting occurs in conjunction with operating a BPSK bit metric calculator.

6.   (Original) A method as in claim 1, where inserting occurs after a Viterbi decoder.

7.   (Original) A method as in claim 1, where error correction decoding comprises first de-interleaving the received symbol stream having the inserted zero symbols.

8.   (Previously presented) A method as in claim 1, where detecting comprises:

estimating a signal to noise ratio (SNR) of a block of L contiguous received symbols, where L is an integer greater than or equal to one;

comparing the estimated SNR to a threshold SNR value; and

replacing L symbols with L zero symbols when the estimated SNR is less than the threshold SNR.

9.   (Original) A method as in claim 1, where detecting comprises examining the output of at least one Automatic Gain Control (AGC) circuit.

10.   (Original) A method as in claim 9, where detecting comprises comparing the output of a slow AGC to a first threshold, comparing the output of a fast AGC to a second threshold, and replacing symbols with zero symbols when either the first or the second threshold is exceeded.

11.   (Original) A method as in claim 9, where detecting comprises comparing a difference between the output of a slow AGC and the output of a fast AGC to a threshold, and replacing symbols with zero symbols when the difference exceeds the threshold.

12.   (Original) A method as in claim 9, where detecting comprises comparing a difference between the output of a fast AGC and an average of the output of the fast AGC to a threshold, and replacing symbols with zero symbols when the difference exceeds the threshold.

13.   (Original) A method as in claim 1, where detecting uses information received from a transmitter that is indicative of a time when a deep fade occurs.

14.   (Currently amended) A digital signal receiver, comprising:

circuitry for detecting the occurrence of a symbol degrading event for a received

signal and for inserting zero symbols into a received symbol stream to

replace symbols degraded by the symbol degrading event prior to de-

interleaving the received signal, wherein the symbol degrading event

occurs after transmission and before reception of the received signal; and

a decoder for decoding the received symbol stream having the inserted zero

symbols.

15.   (Original) A digital signal receiver as in claim 14, where the decoder

comprises a Reed-Solomon decoder.

16.   (Original) A digital signal receiver as in claim 14, where the decoder

comprises a BCH decoder.

17.   (Original) A digital signal receiver as in claim 14, where the decoder

comprises a Turbo decoder.

18.   (Original) A digital signal receiver as in claim 14, where said circuit

inserts the zero symbols in conjunction with operation of a BPSK bit metric calculator.

19.   (Original) A digital signal receiver as in claim 14, where said circuit

inserts the zero symbols after a Viterbi decoder.

20.   (Original) A digital signal receiver as in claim 14, further comprising a de-interleaver for de-interleaving the received symbol stream having the inserted zero symbols.

21.   (Previously presented) A digital signal receiver as in claim 14, where said circuit comprises:

means for estimating a signal to noise ratio (SNR) of a block of L contiguous received symbols, where L is an integer greater than or equal to one;

means for comparing the estimated SNR to a threshold SNR value; and

means for replacing L symbols with L zero symbols when the estimated SNR is less than the threshold SNR.

22.   (Original) A digital signal receiver as in claim 14, where said circuit comprises means for examining the output of at least one Automatic Gain Control (AGC) circuit.

23.   (Original) A digital signal receiver as in claim 22, where said circuit comprises means for comparing the output of a slow AGC to a first threshold, means for comparing the output of a fast AGC to a second threshold, and means for replacing symbols with zero symbols when either the first or the second threshold is exceeded.

24.   (Original) A digital signal receiver as in claim 22, where said circuit comprises means for comparing a difference between the output of a slow AGC and the output of a fast AGC to a threshold, and means for replacing symbols with zero symbols when the difference exceeds the threshold.

25.   (Original) A digital signal receiver as in claim 22, where said circuit comprises means for comparing a difference between the output of a fast AGC and an average of the output of the fast AGC to a threshold, and means for replacing symbols with zero symbols when the difference exceeds the threshold.

26.   (Original) A digital signal receiver as in claim 14, where said circuit uses information received from a transmitter that is indicative of a time when a deep fade occurs.

27.   (Previously presented) A method to receive a signal that passes through a channel that is periodically obstructed by a rotating propeller blade, comprising:

detecting the occurrence of a fading condition due to obstruction by the propeller blade;

in response to detecting the occurrence of the fading condition, inserting zero symbols into a received symbol stream at the receiver to replace symbols degraded by the fading condition caused by the obstructing propeller blade;

de-interleaving the received symbol stream having the inserted zero symbols; and

decoding the received symbol stream having the inserted zero symbols.

28. (Original) A method as in claim 27, where decoding comprises operating a concatenated forward error correction (FEC) decoder.

29. (Original) A method as in claim 27, where decoding comprises operating one of a Reed-Solomon decoder, a BCH decoder, or a Turbo decoder.

30. (Previously presented) A method to operate a satellite to receive a signal that passes through a channel that is periodically obstructed by a rotating propeller blade, comprising:

detecting, on the satellite, the occurrence of a fading condition due to obstruction by the propeller blade;

in response to detecting the occurrence of the fading condition, inserting zero symbols into a received symbol stream at the satellite to replace symbols degraded by the fading condition caused by the obstructing propeller blade;

de-interleaving the received symbol stream having the inserted zero symbols; and

error correction decoding the received symbol stream having the inserted zero symbols.

31.   (Previously presented) A satellite, comprising a receiver for receiving a signal that passes through a channel that is periodically obstructed, the receiver comprising circuitry for detecting the occurrence of a fading condition due to an obstruction and, in response to detecting the occurrence of the fading condition, for inserting zero symbols into a received symbol stream to replace symbols corrupted by the fading condition caused by the periodic obstruction; and an error correction decoder for decoding the received symbol stream having the inserted zero symbols.